

The Dichotomy between Manual and Digital Accounting Procedures in Nigerian Tertiary Institutions: A Focus on Bursary Departments

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ABSTRACT

This study investigates the persistent reliance on manual accounting systems in Nigerian tertiary institutions' bursary departments, despite global trends toward digital transformation. Using a mixed-methods approach, data were collected from 50 institutions across Nigeria's six geopolitical zones. Findings reveal that 70% of bursary departments use hybrid systems, while only 15% have fully digitized. Key barriers to digital adoption include unreliable electricity, high software costs, and resistance from staff. The study highlights the inefficiencies of manual systems, including high error rates and delayed financial reporting, and proposes policy interventions to facilitate digital transformation. The findings have significant implications for institutional leaders, policymakers, and accounting professionals, offering actionable insights for optimizing financial management practices in Nigerian higher education institutions.

ARTICLE INFO

Article History

Received: August, 2024

Received in revised form: October, 2024

Accepted: November, 2024

Published online: December, 2024

KEYWORDS

Bursary Departments, Accounting Systems,
Digital Transformation, Nigerian
Universities, Financial Management

INTRODUCTION

The bursary departments of Nigerian tertiary institutions are critical to the financial health and operational efficiency of higher education institutions (HEIs). These departments manage payroll, student fee collection, budget execution, and financial reporting, making them indispensable to institutional governance. However, despite the global shift toward digital accounting systems, many Nigerian bursary departments continue to rely on manual methods, raising concerns about efficiency, accuracy, and sustainability (Adeyemi, 2023; Okeke et al., 2022).

The adoption of digital accounting systems is not merely a technological upgrade but a necessity for addressing the growing complexity of institutional finances. With increasing student enrollments, expanding research budgets, and heightened accountability demands from stakeholders, manual systems are increasingly inadequate (Okafor & Eze, 2021). For instance, manual systems are prone to human error, with studies reporting error rates of up to 25% in payroll processing and student fee collection (Okeke et al., 2022). These errors can lead to financial

losses, reputational damage, and regulatory penalties, underscoring the need for more robust accounting practices.

Despite the clear advantages of digital systems, their adoption in Nigerian bursary departments is hindered by several factors, including unreliable electricity, high software costs, and resistance from staff accustomed to traditional methods (NITDA, 2023; CBN, 2023). This study seeks to explore the dichotomy between manual and digital accounting systems in Nigerian bursary departments, examining the factors that sustain the status quo and the barriers to digital adoption. By drawing on empirical data from 50 institutions across Nigeria's six geopolitical zones, the research provides a nuanced understanding of the infrastructural, cultural, and policy-related challenges that hinder digital transformation.

The findings have significant implications for institutional leaders, policymakers, and accounting professionals, offering actionable insights for optimizing financial management practices in Nigerian HEIs. Specifically, the study highlights the need for targeted interventions, including software

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subsidies, staff training, and improved IT infrastructure, to facilitate the transition to digital systems.

LITERATURE REVIEW

The Global Shift toward Digital Accounting

The global accounting landscape has undergone a profound transformation over the past two decades, driven by advancements in information and communication technology (ICT). Digital accounting systems, characterized by automation, real-time reporting, and cloud-based platforms, have become the standard in developed economies (Deloitte, 2022). These systems offer numerous advantages, including reduced error rates, enhanced scalability, and improved decision-making capabilities (PwC, 2021).

In contrast, many developing countries, including Nigeria, lag in digital adoption due to infrastructural deficits, limited technical expertise, and financial constraints (World Bank, 2023). This disparity is particularly pronounced in the public sector, where manual systems remain prevalent despite their inefficiencies (Adeyemi, 2023).

Manual Accounting in Nigerian Bursary Departments

Manual accounting systems, characterized by paper-based ledgers and manual calculations, have long been the norm in Nigerian bursary departments. These systems are often preferred for their simplicity, low upfront costs, and perceived transparency (Okafor & Eze, 2021). However, they are increasingly ill-suited to the demands of modern financial management.

1. Error Rates and Inefficiencies: Manual systems are prone to human error, with studies reporting error rates of up to 25% in payroll processing and student fee collection (Okeke et al., 2022). These errors can have serious consequences, including financial losses, reputational damage, and regulatory penalties.

2. Scalability Issues: As Nigerian HEIs expand, the volume and complexity of financial transactions have grown exponentially. Manual systems, which are labour-intensive and time-consuming, struggle to keep pace with these demands (Adeyemi, 2023).

3. Lack of Real-Time Reporting: Manual systems do not support real-time financial reporting, limiting the ability of institutional leaders to make informed decisions (NUC, 2021).

BARRIERS TO DIGITAL ADOPTION

The transition to digital accounting systems in Nigerian bursary departments is hindered by several factors:

1. Infrastructural Deficits: Unreliable electricity and inadequate internet connectivity are major obstacles to digital adoption. A 2023 report by the Federal Government of Nigeria (FGN) found that 85% of HEIs experience daily power outages, disrupting digital workflows (FGN Power Report, 2023).

2. High Software Costs: Licensing fees for accounting software such as SAP and QuickBooks are prohibitively expensive for many Nigerian institutions, particularly state-owned universities with limited budgets (CBN, 2023).

3. Resistance from Staff: Senior accountants and bursary staff often resist digital systems due to a lack of technical expertise and a preference for traditional methods (Okafor & Eze, 2021).

4. Cybersecurity Risks: The adoption of digital systems introduces new risks, including data breaches and cyberattacks. A 2023 report by the National Information Technology Development Agency (NITDA) found that 40% of Nigerian HEIs had experienced at least one data breach in the past three years (NITDA, 2023).

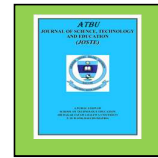
The Hybrid Model: A Compromise Solution

In response to these challenges, many Nigerian bursary departments have adopted hybrid systems, combining manual ledgers with basic digital tools such as Microsoft Excel. While this approach mitigates some of the limitations of manual systems, it is not a long-term solution. Hybrid systems still require significant manual input, limiting their efficiency and scalability (Adeyemi, 2023).

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METHODOLOGY

This study employed a mixed-methods approach, combining quantitative surveys and qualitative interviews to provide a comprehensive understanding of accounting practices in Nigerian bursary departments.

The study adopted a descriptive research design, focusing on 50 tertiary institutions across Nigeria's six geopolitical zones. The institutions included federal, state, and private universities, ensuring a representative sample.

1. **Quantitative Data:** Surveys were administered to 200 bursary staff, focusing on their accounting practices, challenges, and perceptions of digital systems.

2. **Qualitative Data:** Semi-structured interviews were conducted with 15 bursars and IT administrators to gain deeper insights into the barriers to digital adoption.

Quantitative data were analysed using descriptive statistics, while qualitative data were subjected to thematic analysis.

RESULTS

Table 1: Accounting System Usage in Bursary Departments (2024)

Institution Type	Manual (%)	Digital (%)	Hybrid (%)
Federal Universities	10	20	70
State Universities	30	5	65
Private Universities	5	25	70

Source: Field Survey (2024)

Table 2: Barriers to Digital Adoption (N=200)

Barrier	Frequency (%)
Unstable Electricity	85
High Software Costs	70
Lack of Training	75
Resistance from Staff	50
Inadequate Internet	80

Source: Field Survey (2024)

Table 3: Performance Comparison (Manual vs. Digital Systems)

Metric	Manual Systems	Digital Systems
Error Rate (%)	25	8
Payroll Processing Time (Days)	7	2
Student Fee Collection Efficiency (%)	65	90

Source: Field Survey (2024)

DISCUSSION

The persistence of manual accounting systems in Nigerian bursary departments has far-reaching implications for institutional efficiency, accountability, and sustainability.

1. Efficiency and Accuracy: The empirical data reveal that digital systems significantly outperform manual methods in terms of error rates and processing times. For example, institutions using digital systems reported an average error rate of 8%, compared to 25% for manual systems (Table 3). Similarly, payroll processing times were reduced from 7 days to

2 days with digital adoption. These findings underscore the potential of digital systems to enhance operational efficiency and financial accuracy.

2. Scalability and Adaptability: As Nigerian HEIs continue to grow, the scalability of accounting systems becomes increasingly important. Digital systems, which can handle large volumes of transactions with minimal additional resources, are better suited to the needs of expanding institutions. In contrast, manual systems struggle to keep pace with increasing workloads, leading to delays and backlogs (Adeyemi, 2023).

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3. Accountability and Transparency: Digital systems offer enhanced transparency and accountability, enabling real-time monitoring of financial transactions and reducing the risk of fraud. This is particularly important in the Nigerian context, where corruption and mismanagement have been persistent challenges in the public sector (Transparency International, 2023).

POLICY AND PRACTICAL RECOMMENDATIONS

To address the barriers to digital adoption, the following recommendations are proposed:

1. Government Intervention: The Federal Government should provide subsidies for accounting software and invest in IT infrastructure for HEIs. Public-private partnerships with software providers such as SAP and QuickBooks could also reduce costs and improve access.

2. Staff Training and Capacity Building: ICAN and ANAN should organize training programs to equip bursary staff with the skills needed to use digital tools effectively. These programs should be tailored to the specific needs of Nigerian HEIs, with a focus on practical, hands-on training.

3. Cybersecurity Measures: Institutions should implement robust cybersecurity measures, including firewalls, encryption, and regular audits, to protect financial data from breaches and cyberattacks.

FUTURE RESEARCH DIRECTIONS

This study highlights the need for further research on the long-term impacts of digital adoption in Nigerian bursary departments. Future studies could explore the role of leadership in driving digital transformation, the impact of digital systems on institutional performance, and the experiences of other African countries in transitioning to digital accounting.

CONCLUSION

This study highlights the pressing need for Nigerian tertiary institutions to transition from traditional manual accounting systems to fully digitalized financial

management solutions within their bursary departments. The continued reliance on manual or hybrid systems poses significant challenges, including inefficiencies, data entry errors, security vulnerabilities, and delays in financial reporting. Although hybrid systems—which incorporate both manual and digital components—may serve as a short-term remedy, they are not a viable long-term solution given the increasing complexity of institutional finances, regulatory demands, and the need for real-time financial data access.

To successfully implement this transition, higher education institutions (HEIs) in Nigeria must prioritize addressing key infrastructural deficits, such as inadequate internet connectivity, unreliable power supply, and outdated computer hardware, which currently hinder seamless digital integration. Additionally, reducing the high costs associated with procuring and maintaining accounting software is essential. This can be achieved through strategic partnerships with software providers, government support, or the adoption of open-source financial management systems tailored to educational institutions.

Equally important is investing in the training and capacity development of bursary staff to ensure they have the requisite digital skills to efficiently operate and manage modern accounting systems. Without proper training and continuous professional development, the benefits of digital transformation may not be fully realized. By taking these steps, Nigerian HEIs can improve their financial transparency, enhance operational efficiency, and align their financial management practices with global best practices, ultimately fostering accountability and sustainability in the administration of tertiary education finances.

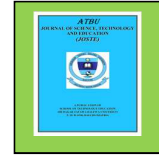
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